212 Ambient Particulate Profiler

Met One Instruments, Inc.

Ambient profiling of aerosol particulates has been simplified by the Met One Instruments Model 212 Ambient Particulate Profiler. The 212 sizes and counts particles in eight digital bins, and reports the information on command. Each of the eight channels may be field configured to customer requirements.

A Remarkably Flexible, Higher Performance Instrument Featuring:

- Eight Real-Time Channels
- Self-Contained
- Low Power / Low Cost
- 0.5µm to 10µm (typical) range, extended ranges available
- Simple Operation
- Weatherproof package
- Sheath air technology

How it Works

Using a laser-diode based optical sensor, the 212 uses light scatter technology to detect, size and count particles. This detected information is output as particles per size range.

Two Models

Two models of the 212 Profiler are available, each with specific features.

For general purpose outdoor applications the Model 212-1 is recommended. The 212-1 has a minimum sensitivity of 0.5 microns and will size particles up to 10 microns. Particles larger than 10 microns are counted, but sized as 10 microns. The 212-1 uses an extended life Laser Diode that provides 30,000 hours of life, three times the life of standard lasers. Additionally the 212-1 will operate reliably in elevated temperatures.

For special applications the Model 212-2 has a minimum sensitivity of 0.3 microns. A lower wavelength Laser Diode is used in the 212-2 and will produce 10,000 hours of life.

Applications:

Air Quality Surveys
Work Place Monitoring
Ambient Monitoring
Emissions Sampling
Remote Monitoring

Special size ranges are available. Consult factory for details.

Measurement Principle	Optical, Light-Scatter using a Laser Diode
Flow Rate	1.0 LPM
Measuring Ranges	
212-1	0.5µm to 10µm (eight selectable sizes)
212-2	0.3µm to 10µm (eight selectable sizes)
Concentration	0-9,000,000 Particles per cubic. ft.
Sample Flow Rate	1 LPM
Sample Interval	1 - 60 seconds
Accuracy	+ / - 10% to calibration aerosol
Communication	RS 232 Output
Power	12 VDC 240 mA maximum Inlet Heater, additional 750 mA
Temperature	212-1 0 to +70 Degrees Celsius 212-2 0 to +40 Degrees Celsius
Weight	3 lb. (1.2kg)
Size	Diameter 4.0 in, Length 7.5 in +12” for inlet tube
INCLUDED OPTIONS	
Software	Real Time Datalogging and Graphing, Remote Operation
Software requirements	Pentium, 100 mhz, 16MB Ram

Installation

Installation is quick and easy with the 212 particle counter. It can be mounted on a tripod, wall mounted, bench mounted or on pole. Due to its rugged weatherproof enclosure, the 212 can be installed in most outdoor environments.

Data is calculated every sample period and downloaded through the serial cable. The data can be captured by any serial device (Laptop, Palm top, Serial printer, etc.). The data can then be analyzed using standard programs such as excel.

With the included software package, data is automatically saved and graphed in real-time. This software allows the remote control of the 212, sample time, date/time, unit ID, rolling averages, alarm levels, start and stop, and reset commands can all be made from a laptop with the software.

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